

A LIST OF THE SPECIES OF LAND MOLLUSCA COLLECTED BY  
MR. W. DOHERTY IN THE MALAY ARCHIPELAGO; WITH  
DESCRIPTIONS OF SOME SUPPOSED NEW SPECIES AND  
VARIETIES.

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Read 11th November, 1898.

PLATE XI.

THE shells dealt with in this paper were part of a collection made by Mr. William Doherty some three or four years ago. The duplicates having come into my hands (the first set having been acquired by the British Museum), I take this opportunity of giving a list of the species I have succeeded in identifying, and of describing some new forms. Several species still remain to be worked out. In the comparison of the new forms I have been greatly assisted by Dr. O. von Möllendorff, especially with the minute and, therefore, more difficult ones. To Mr. Edgar A. Smith, Assistant Keeper of Zoology at the British Museum, I am also indebted for much valuable aid.

LIST OF SPECIES.

PULO LAUT ISLAND, S.E. BORNEO.

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|---------------------------------------|--|
| <i>Ariophanta Mindaiensis</i> , Bock. | <i>Diplommatina (Paxillus) levis</i> , |
| <i>Clausilia Dohertyi</i> , Aldrich.  | n.sp.                                  |

SOUTH CELEBES.

- |                                      |  |
|--------------------------------------|--|
| <i>Streptaxis planus</i> , n.sp.     | <i>Cyclotus semiliratus</i> , Mdff.    |
| <i>Xesta Wallacei</i> , Pf.          | <i>Diplommatina (Palaina) Moellen-</i> |
| „ <i>dimidiata</i> , Smith, var.     | dorffi, n.sp.                          |
| <i>Obba heroica</i> , Pf.            | <i>Diplommatina (Palaina) tumens</i> , |
| <i>Planispira flavidula</i> , Marts. | n.sp.                                  |
| <i>Cyclotus fasciatus</i> , Marts.   | <i>Lagochilus pachystoma</i> , Mdff.   |

BALI ISLAND.

- |  |                                     |
|--|-------------------------------------|
| <i>Kaliella angigyra</i> , Mdff., var.       | <i>Diplommatina Baliana</i> , n.sp. |
| <i>Carychium Balianum</i> , n.sp.            | <i>Pupina (Moulinsia) obliqua</i> , |
| <i>Diplommatina auriculata</i> , Mdff., var. | Smith.                              |

SUMBAWA ISLAND.

- |                                       |  |
|---------------------------------------|--|
| <i>Xesta nemorensis</i> , Müll.       | <i>Clausilia recondita</i> , Sykes.            |
| <i>Hemiplecta adolescens</i> , Smith. | <i>Cyclotus politus</i> , Sby.                 |
| „ <i>Sumbawana</i> , Smith.           | <i>Pupina Dohertyi</i> , Smith.                |
| <i>Planispira infracta</i> , Marts.   | „ ( <i>Moulinsia</i> ) <i>obliqua</i> , Smith. |
| <i>Trochomorpha discreta</i> , Smith. |  |

SUMBA ISLAND.

*Xesta cochlostyloides*, Schepmann. *Diplommatina Baliana*, n.sp.  
*Chloritis conector*, Smith.

ADONARA ISLAND.

*Xesta rareguttata*, var. *sparsa*, Mouss. *Chloritis argillacea*, Fér.  
*Planispira Adonarana*, n.sp. *Leptopoma vitreum*, Less.

PURA OR POERA ISLAND.

*Xesta rareguttata*, var. *crebriguttata*, *Bulinus Selayarensis*, Smith.  
 Marts.  
*Amphidromus inconstans*, Fulton,  
 vars. A, B, & D.

ALOR OR OMBAI ISLAND.

*Xesta rareguttata*, var. *crebriguttata*, *Chloritis argillacea*, Fér.  
 Marts. *Amphidromus inconstans*, Fulton.

OINAINISA, S.W. TIMOR.

*Xesta Dammaensis*, Smith. *Amphidromus contrarius*, Müll.  
 „ *Peaseana*, Pf. „ „ var. *crassa*, n.  
*Chloritis argillacea*, Fér. *Cyclotus reticulatus*, Marts.  
*Trochomorpha tricolor*, Marts. *Omphalotropis tenuis*, n.sp.

TENIMBER ISLAND.

*Xesta Micholitzii*, Mdff. *Corasia Tenimberica*, Mdff.  
*Chloritis eurychasma*, Bttg. *Amphidromus columellaris*, Mdff.  
*Eulota biteviata*, Mdff. *Hypselostoma Dohertyi*, n.sp.  
 „ *hemispherica*, Mdff. *Pupa (Leucochilus) Niobe*, n.sp.  
*Plecteulota goniosstoma*, Mdff. *Adelomorpha Dohertyi*, n.sp.

AMBOINA.

*Xesta Strubelli*, Bttg.

BURU ISLAND.

*Pfeifferia Najas*, Pf. *Cyclotus Amboinensis*, var. *elatior*,  
*Xesta Peaseana*, Pf. Marts.  
*Macrocyclus lutea*, Marts. *Diplommatina Strubelli*, Bttg.  
*Chloritis mima*, n.sp. *Pupina (Callianella) fulgida*, n.sp.  
 „ *selenitoides*, n.sp. „ „ *Wallacei*, Pf.  
 „ *unguiculina*, Marts. *Omphalotropis ceramensis*, Pf., var.  
*Planispira zonaria*, Linn. *Helicina idæ*, Pf.

BATCHIAN ISLAND.

*Trochomorpha Ternatana*, Le Guill. *Leptopoma Massena*, Less.  
*Papuina pileolus*, Fér. *Pupina (Porocallia) mirabilis*,  
*Planispira endoptycha*, Marts. n.sp.  
 „ (*Cristigibba*) *anozona*, Marts.



low, whereas it is only very slightly descending in our species; there are also differences in the parietal callus, that of *C. Gruneri* being much thicker in the upper portion, whereas it is of equal thickness in *C. mima*; the latter has the spire very slightly depressed, that of the former is flat. From *C. unguiculastra*, Marts., it can be separated by its smaller size, its raised callus, and its narrower umbilicus.

3. *CHLORITIS SELENITOIDES*, n.sp. Pl. XI, Fig. 9.

Shell depressed, subglobose, openly unbilicated, dark brown; whorls 5, convex, gradually increasing, first three almost flat, last two gradually descending, with obtuse but conspicuous oblique plicate striae; peristome white, slightly expanded, margins joined by a somewhat thickened callus. Diam. maj. 26, alt. 14 mm.

*Hab.*—Buru I.

A distinct species, easily distinguished from others of the genus by its zonitoid form. This and *C. mima* belong to the hairless forms of *Chloritis*.

4. *PLANISPIRA ADONARANA*, n.sp. Pl. XI, Fig. 12.

Shell depressed, globose, thin, smooth, light horn-colour, umbilicus open to about 2 mm. at its widest part, somewhat constricted behind the aperture; whorls  $3\frac{1}{2}$ , slowly increasing, convex, last half-whorl descending about 2 mm.; peristome subcircular, *continuous*, broadly expanded, equal to half the width of the shell, very oblique, a spiral fold just above the periphery for one-third of a whorl behind the aperture, an indication of another is faintly seen on the basal portion of the peristome. Diam. maj. 12, alt. 7 mm.

*Hab.*—Adonara I., Moluccas.

Easily distinguished from *P. eudoptycha*, Marts., by its continuous peristome and fewer whorls.

5. *AMPHIDROMUS CONTRARIUS*, Müll., var *CRASSA*, n. Pl. XI, Fig. 8.

This is similar in shape to the typical form, but is a much more solid shell; the columella is thick and round, not thin and expanded as in the type; whilst the aperture is somewhat higher in proportion to the height of the shell, and the interrupted oblique colour-stripes of the type are absent on the last whorl of this species. Diam. maj. 20, alt. 40 mm.

*Hab.*—Timor I.

Numerous examples of the typical form were also collected at Timor by Mr. Doherty.

6. *HYPSELOSTOMA DOHERTYI*, n.sp. Pl. XI, Fig. 17.

Shell dextral, triangular, umbilicus deep and moderately wide, almost smooth; whorls 4, first three small, convex, body-whorl large, somewhat depressed in the centre and keeled above and below, slightly ascending; interior of aperture armed with five teeth, two on parietal wall, two palatal teeth, and one on the columella side of

the aperture; peristome subcircular, expanded, continuous. Diam. maj. 2·75, alt. 2 mm.

*Hab.*—Tenimber I.

Allied to *H. Everetti*, Smith, from Kalao Island, but this species is narrower, the aperture does not project so far from the body-whorl, it is more closely coiled below, and is not perspectively umbilicated.

7. PUPA (LEUCOCHILUS) NIOBE, n.sp. Pl. XI, Fig. 10.

Shell elongate-oval, rimate, smooth, dirty white; whorls 5, convex; peristome oval, thin, continuous, expanded; internal armature of the aperture consists of five plaits, two, rather long entering folds on the parietal wall, one on the columella side, and two on the basal portion of aperture. Diam. maj. 1, alt. 2 mm.

*Hab.*—Tenimber I.

This has kindly been compared by Dr. von Möllendorff, who says that the species has some affinity with *P. recondita*, Tapp.-Can., from the Aru Islands, but is smaller and more cylindrical in form.

8. CARYCHIUM BALIANUM, n.sp. Pl. XI, Fig. 11.

Shell elongate, rimate, smooth, glassy, semi-transparent; whorls  $5\frac{1}{2}$ , convex, regularly increasing; aperture oval, somewhat oblique; peristome thin, slightly expanded, continued over the parietal wall; a fold on upper part of columella. Diam. maj. 0·75, alt. 1·75 mm.

*Hab.*—Bali I.

I am indebted to Dr. von Möllendorff for a comparison of this species. He writes: "Differs from *C. Javanum*, Mölldff., from Java, in being of a more slender form, smaller, and with a narrow aperture."

9. DIPLOMMATINA BALIANA, n.sp. Pl. XI, Fig. 16.

Shell dextral, thin, oval, transparent white, tinted with a golden colour, spire acuminate; whorls  $6\frac{1}{2}$ , first five increasing slowly, penultimate slightly broader than the last, sculptured with close-set, thin costæ, which are wider apart on the latter part of the last whorl; a slight constriction above the aperture; aperture circular, erect; peristome somewhat expanded, continuous. Diam. maj. 1·25, alt. 2·5 mm.

*Hab.*—Bali and Sumba Is.

In general form and sculpture very near *D. concolor*, Quad. & Mdff., from the islands of Luzon and Palawan; but readily separated therefrom by its almost circular aperture and the absence of a columella fold. Dr. von Möllendorff informs me that he knows of no Javan species that approaches this.

10. DIPLOMMATINA (PALAINA) MOELLENDORFFI, n.sp. Pl. XI, Fig. 18.

Shell dextral, ovate, slightly rimate, either pale yellow or suffused with a pinkish colour; whorls 6, very convex, obliquely striate, penultimate, slightly broader than body-whorl, the latter shortly ascending; constricted just above the aperture, with a prominent

bulge or protuberance to the left of it; aperture circular; peristome white, thin, broadly expanded, and continued over the parietal wall of the last whorl. Diam. maj. 2·5, alt. 5 mm.

*Hab.*—Macassar, Celebes.

In addition to *D. (Arinia) Minahassæ*, Kobelt,<sup>1</sup> this and the next are the only species of *Diplommatina* recorded from Celebes. The nearest allied species is *D. (Palaina) chrysostoma*, Smith, but *D. Moellendorffi* is distinctly separated by its less oblong form and its remarkable broadly expanded peristome.

11. DIPLOMMATINA (PALAINA) TUMENS, n.sp. Pl. XI, Fig. 4.

Similar to *D. Moellendorffi*, but shorter, the penultimate whorl smoother, compressed and bulging out beyond the body-whorl; peristome larger in proportion to size of shell than in *D. Moellendorffi*. Diam. maj. 3·5, alt. 4·75 mm.

*Hab.*—Macassar, Celebes.

This curious form, of which only a single specimen was obtained, may possibly prove to be but an abnormal form of *D. Moellendorffi*.

12. DIPLOMMATINA (ARINIA) TALAUTANA, n.sp. Pl. XI, Fig. 13.

Shell dextral, oval, thin, rimate, semi-transparent, white shading to golden above, closely and delicately costate; whorls 5, rapidly increasing, last three almost equal in width; aperture circular, erect; peristome thin, continuous, with an outer flange or rim. Diam. maj. 1·5, alt. 2·75 mm.

*Hab.*—Talaut I.

A very pretty and distinct species, readily distinguished from the S. Flores species, *D. blanda*, Smith, by its having a less number of whorls and by its finer sculpture.

13. DIPLOMMATINA (PAXILLUS) LEVIS, n.sp. Pl. XI, Fig. 14.

Shell dextral, oblong-conic, dirty white, smooth except for traces of fine oblique striæ on front of body-whorl, non-rimate; whorls 7, first five almost flat, last two convex; aperture almost vertical, subauriform; peristome double, inner portion slightly raised above the outer rim, continued over the body-whorl by a thin transparent callus; two folds on columella, lower one alone visible from the exterior, upper one beginning about half a whorl from the exterior margin of aperture, and continued interiorly; on the interior side of outer wall, and situated just above the peristome, are two short transverse plaits, which can be seen from the exterior if the shell be wetted, whilst on the parietal wall above there is a similar longitudinal fold, which can only be seen by breaking the shell open; above and to the left of the columella there is a remarkable tear-shaped protuberance. Diam. maj. 2·25, alt. 4 mm.

*Hab.*—Pulo Laut, S.E. Borneo.

<sup>1</sup> Abhandl. Senckenburg. Gesell., Bd. xxiv (1897), p. 36.

This is the first recorded dextral species belonging to the section *Paxillus*. On breaking open a *D. (Paxillus) adversus*, Ad., for comparison, I found that in addition to the two plaits on the interior of the outer wall, there is a strong lamelliform plait hanging, as it were, from the parietal wall. I am not aware that this interesting fact has ever been recorded before.

14. *CYCLOPHORUS DOHERTYI*, n.sp. Pl. XI, Fig. 5.

Shell globose-conic, moderately thick, umbilicus almost, or entirely covered by the peristome, dark reddish-brown, with oblique growth-lines crossed by microscopical spiral striæ, causing a somewhat granular appearance; whorls  $6\frac{1}{2}$ , convex, last slightly keeled at the periphery; suture somewhat deep; aperture subcircular; peristome oblique, double, continuous. Diam. maj. 18, alt. 18 mm.

*Hab.*—Sangir I.

A very distinct species, with a *Choanopoma*-like peristome.

15. *PUPINA (MOULINSIA) CYLINDRICA*, n.sp. Pl. XI, Fig. 1.

Shell oblong-ovate, thin, polished, semi-transparent; whorls 5; suture distinctly margined; aperture subcircular, almost vertical; peristome slightly thickened, a semicircular notch on left margin. Diam. maj. 3, alt. 5.5 mm.

*Hab.*—Dodinga, Gilolo I.

Also a very distinct species, unlike anything I am acquainted with from the Moluccas.

16. *CALLIANELLA FULGIDA*, n.sp. Pl. XI, Fig. 3.

Shell imperforate, polished, ovate-oblong; suture margined; spire oblique; whorls  $3\frac{1}{2}$ , rapidly increasing, smooth, two only are visible from the front; aperture circular; peristome oblique, continuous, slightly thickened. Diam. maj. 3.5, alt. 5.5 mm.

*Hab.*—Buru I.

In form very like *C. Wallacei*, Pf., but much larger, not so compressed, broader, and with larger aperture in proportion to size.

17. *PUPINA (POROCALLIA) MIRABILIS*, n.sp. Pl. XI, Fig. 6.

Shell acuminate-oval, smooth, shining, imperforate; whorls 5, rapidly increasing, last almost equal in height to two-thirds of whole shell; suture margined; aperture circular, almost erect, peristome thickened, a tube behind the left margin of aperture just below point of insertion, generally short but rarely continuous across the body-whorl towards the apex. Diam. maj. 4, alt. 5.75 mm.

*Hab.*—Sangir and Gilolo Is.

In all the numerous specimens found on Gilolo I. the tube is short; of the eight specimens found on Sangir I., three have the long tube extending over and above the body-whorl, and five have the tube short. The direction of the tube in those examples where it is short varies: in some the tube turns upwards, in others it lies more or less at right angles to the spire.

